



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/895,535	06/29/2001	James S. Magdych	NAIIP009/01.114.01	6510

28875 7590 06/24/2005

Zilka-Kotab, PC
P.O. BOX 721120
SAN JOSE, CA 95172-1120

EXAMINER

AILES, BENJAMIN A

ART UNIT	PAPER NUMBER
----------	--------------

2142

DATE MAILED: 06/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/895,535

Applicant(s)

MAGDYCH ET AL.

Examiner

Benjamin A. Ailes

Art Unit

2142

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 and 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This action is in regards to Amendment "B" received on 30 March 2005.
2. Claims 1-23 and 25 remain pending.
3. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware of.

Claim Rejections - 35 USC § 112

4. Applicant's arguments, see REMARKS, paragraph 1, filed 30 March 2005, with respect to 25 have been fully considered and are persuasive. The 112 1st rejection of claim 25 has been withdrawn.

Claim Rejections - 35 USC § 102

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
6. Claims 1, 3-8, 10-15, and 17-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Fudge (U.S. 6,205,552).
7. Regarding claims 1, 8, 15, 22, and 23, Fudge teaches a risk assessment scan, comprising:
 - a) selecting a plurality of risk-assessment modules each including vulnerability checks associated with a risk-assessment scan, and requiring communication via at least one predetermined port (see Fig. 1, part 160, col. 2, lines 58-63, and col. 3, lines 48-55);

- b) determining a first set of ports required for communicating with network components subject to the risk-assessment modules associated with the risk-assessment scan (col. 3, lines 39-44 and col. 3, lines 64 – col. 4, line 41);
 - c) executing a port scan of only the first set of ports associated with the selected risk-assessment modules, for reducing the number of ports scanned during the port scan, wherein latency is reduced since a port scan involving 65,536 ports is avoided (col. 2, lines 22-27 and 34-36 and col. 2, lines 31-40).
 - d) determining a second set of ports based in the port scan, the second set of ports being unavailable for communicating with the network components subject to the risk-assessment modules associated with the risk-assessment scan (col. 3, lines 35-39); and
 - e) disabling the risk-assessment modules associated with the second set of ports to minimize the duration of the risk-assessment scan (col. 3, lines 35-39 and 51-55).
8. Regarding claims 3, 10, and 17, Fudge discloses the method wherein a plurality of the risk-assessment modules are user-specified (col. 3, lines 30-33).
9. Regarding claims 4, 11, and 18, Fudge discloses the method further comprising storing a third set of ports including the first set of ports and excluding the second set of ports (col. 3, lines 34-39).

Art Unit: 2142

10. Regarding claims 5, 12, and 19, Fudge discloses the method further comprising comparing the port associated with each risk-assessment module with the stored third set of ports (col. 3, lines 39-44).

11. Regarding claims 6, 13, and 20, Fudge discloses the method further comprising performing the vulnerability checks of the risk-assessment module if the port associated with the risk-assessment module matches at least one port of the stored third set of ports (col. 3, lines 48-55).

12. Regarding claims 7, 14, and 21, Fudge discloses the method wherein the risk-assessment module is disabled if the port associated with the risk-assessment module does not match at least one port of the stored third set of ports (col. 4, lines 25-31).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

15. Claims 2, 9, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fudge in view of Choi (U.S. 5,734,824), hereinafter referred to as Choi.

16. Regarding claims 2, 9, and 16, Fudge discloses the method of associating risk-assessment modules with ports (col. 2, lines 58-63), but is silent on the elimination of port redundancy. However in related prior art, Choi discloses a method for eliminating redundant communication ports (Choi, col. 8, lines 59-65). One of ordinary skill in the art at the time of the applicant's invention would have found it obvious to utilize the port redundancy elimination method as disclosed by Choi in combination with the risk-assessment method disclosed by Fudge. One would have been motivated to make such a combination in order to significantly reduce the time and cost involved in scanning for vulnerable devices in a network (see Fudge, col. 2, lines 20-23).

17. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fudge in view of what is well-known in the art as disclosed by Graham-Cumming, Jr. (U.S. 6,182,146), hereinafter referred to as Graham.

18. Regarding claim 25, Fudge discloses the method of associating risk-assessment modules with ports (col. 2, lines 58-63 and col. 3, lines 48-55) but does not explicitly disclose a web server vulnerability module associating with a predetermined port of 80, an e-mail vulnerability module with a predetermined port of 31337, and a Trojan program module with a predetermined port of 25. However, in conventional networking systems and what is regarded as well known in the computer networking arts as

disclosed by Graham, application and port mappings are well defined and it is well known to associate certain applications with specific ports both statically and dynamically in order to ensure the proper network communication between network nodes. For this reason, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify Fudge to associate vulnerability modules with specific network ports which are already defined and standardized as explained above and in reference to Graham (see col. 1, lines 14-40).

Response to Arguments

19. Applicant's arguments filed 30 March 2005 have been fully considered but they are not persuasive.

20. (A) Applicant argues: "...the "scanning" in the above Fudge excerpts relates to scanning for vulnerabilities, not a port scan, as claimed by applicant..."

21. As to point (A), the applicant's argument is not persuasive. Fudge discloses in column 2, lines 34-37 and lines 58-63 the scanning for vulnerabilities by conducting the scan on ports and by scanning only ports that deemed necessary to be scanned. This is the same as claimed by applicant, "...port scan of only the first set of ports associated with the selected risk-assessment modules, for reducing the number of ports scanned during the port scan, wherein latency is reduced." Fudge also discloses in column 4, lines 21-24 services that are used at specific ports to conduct port scans. This is another way of conducting a port scan.

22. (B) Applicant argues: "Fudge *teaches away* from applicant's claimed limited port scan that limited to only the first set of ports associated with the selected risk-

assessment modules, for reducing the number of ports scanned during the port scan, wherein latency is reduced since a port scan involving 65,536 ports is avoided."

23. As to point (B), the applicant's argument is not persuasive. In reference to point (A) Fudge discloses the scanning of only ports that are deemed necessary to be scanned. The ability to reduce the number of ports being scanned is also disclosed as explained above and it should be noted that to reduce the number of ports, in this case the maximum number of 65,536, is merely an inherent feature which is an expected event which is expected by the reduction of the number of ports being scanned in both the applicant's claims and in the invention as disclosed by Fudge.

24. (C) Applicant argues: "...[Fudge does not disclose a] third set of ports including the first set of ports ... and excluding the second set of ports, and/or any comparison of the port associated with each risk-assessment module with the stored third set of ports..."

25. As to point (C), the applicant's argument is not persuasive. Fudge discloses the elimination of certain ports as explained in point (A) and discloses in column 3, lines 34-39 the ability to categorize ports into three different groups to assist in determining which ports should be scanned and which ports should not be scanned in order to reduce the time it takes to scan ports. Also, in column 4, lines 21-24, Fudge discloses the use of only scanning ports which use particularly well known services, thus the amount of ports scanned is reduced because functions are performed on less than all available ports.

Conclusion

26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin Ailes, whose telephone number is (571) 272-3899. The examiner can normally be reached Monday-Friday (7:30-5).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached at (571) 272-3868. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-3906.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [benjamin.ailes@uspto.gov].

Art Unit: 2142

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

BAA

A handwritten signature in black ink, appearing to read "Andrew Caldwell". The signature is fluid and cursive, with the first and last names being more prominent.

**ANDREW CALDWELL
SUPERVISORY PATENT EXAMINER**